ABSTRACT

ACTIVITY TEST OF A FIBRINOLYTIC ENZYME RED BEAN TEMPEH (*Vigna angularis)* FERMENTATION PRODUCT OF *Rhizopus oryzae* FNCC 6078

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Fibrinolytics enzyme is one of the protease enzyme that can used to break down fibrin in cardiovascular therapy. Fibrinolytic enzyme can be sourced from microorganisms, from example is Bacillus has derived from fermented traditional food. Bacillus bacteria has a function as a producer of proteolytic. Tempeh is one of the traditional fermented foods from Indonesia that made from soybean (Glycine max) fermented by Rhizopus sp fungi which also produce fibrinolytic enzymes. In this study aims to obtain a protease enzyme that has fibrinolytic and characterization from the extract of rough fermentation of red bean tempeh (Vigna angularis). The results of the fibrinolytic enzyme activity test using a positive tyrosine standard that contain protease enzymes. Meanwhile, the analysis of the characterization was found that the rough extract of red bean tempeh can reach optimum conditions at temperature 50 C and pH 5. While on metal activator, Mg2 + metal showed increased activity of fibrinolytic enzyme and PMSF inhibitor showed a strong resistance which showed serine protease group. This result proves that the rough extract of red bean tempe has potential fibrinolytic enzyme activity and can be used as alternative thrombolytic therapy.

Keywords: Fibrinolytic enzyme, Activity test, *Vigna angularis, Rhizopus,* Temperature, Metal